

## SVL Services

### Graphics & Multimedia

- Computer modeling, concept animation
- High resolution graphics for conference presentations

*CD/DVD authoring and duplication*

### Video Preparation Facility (VPF)

- Professional quality audio/video development
- Conversion of visualizations in multiple formats  
*DVD, VHS, and digital movies*

### Scientific Visualization Lab (SVL)

- Multiple SGI Infinite Reality Graphic Pipes
- SGI Onyx Hi-Performance Graphics systems  
*DVD+RW/CD-RW recorder, digital scanning,  
4mm/8mm tape drives, ImmersaDesk VR  
stereo display*

To redirect *SVL Graphics* to your display

**On the display where you want  
SVL graphics:**

`local>xhost SVLSysSystem.asc.hpc.mil`

*\*utilizing ssh, or the kerberized telnet,  
rlogin, or rsh...*

`local>telnet SVLSysSystem.asc.hpc.mil`

**On the SVL system set your  
remote display**

`SVL>setenv DISPLAY your_display:0.0`

**Note:** PC users may require X-terminal  
emulation software.

### SVL Focus

*User Spotlight  
Events*

*FAQs and More*

*<http://www.asc.hpc.mil/sciviz>*

## ASC MSRC Information

Visit our website for  
additional information  
***<http://www.asc.hpc.mil>***

ASC MSRC SVL  
Hours of Operation  
Monday - Friday  
6 a.m. - 6 p.m. (ET)  
Excluding Federal holidays

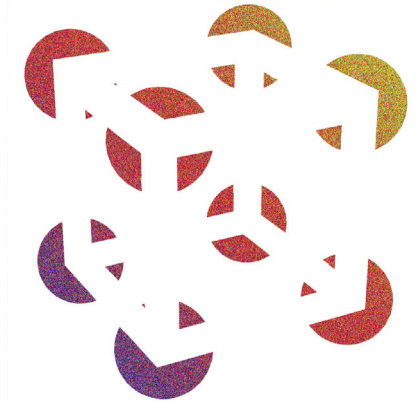
Users **MUST** have an ASC MSRC  
account and a Kerberos SecurID  
card. For weekend, after hours, and  
remote access contact the Customer  
Assistance Center for more information.

Please visit our website for  
information about:

- SVL User Guide
- Hardware Resources
- Software Resources
- SciVis E-News\*\*
- Message of the Day
- Frequently Asked Questions (FAQ)
- Policies and Procedures
- *The latest version of this Guide!*  
.....and much more

**\*\* View the SciVis E-News at:**  
***<http://www.asc.hpc.mil/sciviz/Enews.php>***

Customer Assistance Center  
Toll Free: 1-888-677-2272  
Commercial: 937-255-0194  
DSN: 785-0194  
Fax: 937-656-9538  
[msrchelp@asc.hpc.mil](mailto:msrchelp@asc.hpc.mil)  
0504-03



Aeronautical Systems Center  
Major Shared Resource Center  
(ASC MSRC)

## **Quick Reference Guide to the Scientific Visualization Laboratory (SVL)**

2435 Fifth Street  
Bldg 676  
Wright-Patterson AFB OH  
45433-7802

## Featured Software and Hardware

### Graphics Software

SGI OpenGL with GLut  
SGI OpenGL Inventor Dev. Kit  
SGI OpenGL Performer Dev. Kit  
JAVA2 Dev. Kit  
VRCO CAVE Libraries  
VTK Libraries  
ITK Libraries  
MESA Libraries

### SVL Software Applications

acad · avs · express · fast · fieldview · fluent · eadsim · emanimate  
· ensight · framemaker · grads · gridgen · gnuplot · hdf · imtools  
· khoros · maple · mathematica · matlab · matlabMPI · paraview  
· proengineer · pvwave · tecplot · unigraphics · vis5d · vizserver,  
xanimator, and most HPC application graphical user interfaces.

NOTE: **man** <application> for more info

### Digital Video Multiplexer Option

Permits multiple Infinite Reality pipelines in an Onyx3  
System to work as a single visual display.

#### *ImmersaDesk VR display*

#### *CrystalEyes Stereo 3D Glasses*

#### *Infrared Emitters for selected SGI consoles*

For additional software info visit  
<http://www.asc.hpc.mil/software/sciviz.php>

For additional hardware info visit  
<http://www.asc.hpc.mil/hardware/sciviz.php>

## SVL Perpherial Equipment

### lpsvc1

· *Color LaserJet / Transparencies*

### lpsv

· *B&W LaserJet / Transparencies*

### Epson 1600

· *48 Bit Color Flatbed Scanner*

### Sony DVD

· *DVD+RW/CD-RW*

## UNIX Commands

acoread	adobe file reader
enscript	convert text to postscript
ghostview	postscript file reader
gr_osview	GUI system monitor
gzcat	expand a compressed file
pwd	print working directory
rmdir	remove empty directory
tar	saves/restores multiple files on a single file
top	current processes
xhost [+]	add display access

For additional UNIX information visit  
<http://www.unix.com>

## Printing Commands

lp [-d destination]	default print
lpstat -t	text list of attached printers
printers	GUI list of attached printers

## Kerberos Commands

klist	display credentials
kinit	request credentials
kdestroy	remove credentials
kpasswd	change secure password

For additional Kerberos info:  
<http://www.asc.hpc.mil/customer/userdocs>

## Useful Commands

NOTE: **man** <command> for more info

**archive** - Perform basic file-handling operations on the local  
archival storage system.

**bzip2** - Compresses files using the Burrows-Wheeler block sorting  
text compression algorithm, and Huffman coding.

**gzip** - Reduces the size of the named files using LZ77 coding, each  
file is replaced by one with the extension .gz.

**scp** - Copy files between hosts, scp will ask for passwords if they  
are needed for authentication.

**safeftp** - Non-interactive FTP wrapper script.

**tar** - Save and restore multiple files in a single file.

## SVL SGI Environment

### Programming

cproto, cvs, bash, expect, m4, make, mpi, perl,  
python, rcs, tcl/tk, tcsh

### Browsers/Graphical

gs, gimp, lynx (text only), mozilla, netscape, psz\*

### Text Based

ispell, latex, tex, ndiff

### Editors

ed, red, edit, emacs, ex, nedit, vi, vim, xemacs

### Debuggers

cvd, dbx, ddd, gdb

### Compilers

gcc (C), c++, g++ (C++),  
g77 (FORTRAN 77), f77, f90 (FORTRAN 77/90)

## SVL Environment Variables

\$WRK_DIR	/workspace/username*
\$WRK	/workspace/username
\$HOME	username home directory**
\$ARC	username archive directory**

\*only on HPC systems

\*\*same location as HPC systems

## SciVis Presentation Tips

### *Recommended electronic formats for animation/video processing:*

Animation: \*.avi uncompressed and Quicktime format. A  
resolution of 720x480 or 640x480 is recommended for VHS,  
CD, or DVD.

### *What resolution is best for posters, printing, etc.?*

EPS graphic format for high resolution posters and TIF  
files, *if created in the native software package.*

Graphics for print: 300 dpi.

Screen resolution: 72 dpi.